UNITED STATES PATENT AND TRADEMARK OFFICE

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10/575,833	04/13/2006	Franz Amtmann	AT030058US1	5661

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NXP, B.V.			JOHNSON, JERRAMI	
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1109 MCKAY DRIVE		4147		
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NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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	Application No.	Applicant(s)
Office Action Summary	10/575,833	AMTMANN ET AL.
	Examiner	Art Unit	
	JERRAMI JOHNSON	4147	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>13 April 0206</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-14</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-14</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>01 April 0934</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>4/13/2006</u>.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

U.S. Patent and Trademark Office

PTOL-326 (Rev. 08-06)   **Office Action Summary**   Part of Paper No./Mail Date 20090413

DETAILED ACTION

Claim Objections

1.   Claims 5,11 and 14 objected to because of the following informalities: it is

unclear what is meant by the wording " the control signal can be received and

processed as a component of the indicator signal". For purposes of examination, it will

be assumed that the control signal is a signal that is generator because of the indicator

signal. Appropriate correction is required.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Kalinowski (Pub. No. 20030122654), and further in view of Hulvey (Pub. No.

20020130766).

3.   As per claim 1, Kalinowski discloses a process for detecting simultaneous

transmissions from electronic tags comprising: an interface for contact less

communication with a communications arrangement (Kalinowski Fig. 1, 12); wherein the

circuit comprises memory means for storing identification information (Kalinowski Fig. 1;

22); consisting of information units (Kalinowski Par. 4 "as a memory capable of storing

an n-bit binary code"); which identification information (Kalinowski FIG. 2); is capable of

being supplied via the interface to the communications arrangement (Kalinowski Fig. 1;

46); and wherein the circuit comprises signal processing means that are arranged to

receive and process (Kalinowski Fig. 1; 20, 32, 28); which indicator signal indicates a

substantially simultaneous appearance of two different information units (Kalinowski

Par. 35; "detecting substantially simultaneous transmission of at least two electronic

tags"); of which two different information units (Kalinowski Fig. 5; M'1, M'2); the one

information unit is contained in the identification information stored in the memory stage

of the circuit (Kalinowski Par. 59; "The information relative to the product with which the

tag is associated are recorded in a memory 22"); and the other information unit is

contained in different identification information stored in a memory stage of a different

circuit (Kalinowsk Par. 35; "tag identification system including a multiplicity of electronic

tags associated with a query/read/write device"); upon detection of such a substantially

simultaneous appearance of different information units (Kalinowski Par. 35; "detecting

substantially simultaneous transmission of at least two electronic tags"); and is

communicated to the circuit (Kalinowski Fig. 1; 46); and wherein the signal processing

means (Kalinowski Fig. 1; 20, 32, 28); as a consequence of receiving and processing

(Kalinowski Par. 58; "circuit 20 performs the function of demodulation and decoding of

the signals that modulate the carrier frequency signal";).

4.   Kalinowski does not disclose: an indicator signal; and which indicator signal is

generated by the communications arrangement; the indicator signal; are arranged,

firstly, to interrupt the supply of the identification information that has caused the

indicator signal and are arranged, secondly, to memorize at least the information unit that has caused the indicator signal.

5.   Hulvey discloses a method and apparatus for efficiently querying and identifying multiple items on a communication channel comprising: an indicator signal (Hulvey Fig.4; 56; Par. 59; the CHANGE2 COMMAND "This command is typically issued when both a ONE and a ZERO symbol are transmitted back from the two or more transponders in response"); and which indicator signal is generated by the communications arrangement (Hulvey Par. 62; "a READ, CHANGE1, or CHANGE2 command from the interrogating transceiver."); the indicator signal (Hulvey Fig.4; 56; Par. 59; the CHANGE2 COMMAND "This command is typically issued when both a ONE and a ZERO symbol are transmitted back from the two or more transponders in response"); are arranged, firstly, to interrupt the supply of the identification information that has caused the indicator signal and are arranged, secondly, to memorize at least the information unit that has caused the indicator signal (Hulvey Par. 78; "It would then record that the current digit string is "11" (FIG. 6, step 98), and also record that there is at least one transponder whose ID begins with "10" that needs to be isolated at a later time (FIG. 6, step 96).").

6.   At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use Hulvey's invention, which uses an indicator signal, and means of storing information units of multiple responding tags, inside the processor of Kalinowsk, to further improve the invention of Kalinowski. Kalinowski present invention already detects when a collision accrues between two RFID tags, and by combining with Hulvey, Kalinowski

would be able to isolate the tag that caused the collision and go back and retrieve the

rest of the information at a later time. This method for improving the invention of Kalinowski

was within the ordinary ability of one of ordinary skill in the art based on the teachings of

Hulvey.

7.   As per claim 2, Kalinowski discloses a process for detecting simultaneous

transmissions from electronic tags comprising: the signal processing means (Kalinowski

Fig. 1; 20, 32, 28); comprise a demodulator stage (Kalinowski Fig. 1; 20); which is

arranged to demodulate a carrier signal appearing at the interface (Kalinowski Fig. 1; 12

and Kalinowski Par. 58; "circuit 20 performs the function of demodulation and decoding

of the signals that modulate the carrier frequency signal"); and to supply a demodulated

carrier signal (Kalinowski Fig.1; 20 The carrier signal s demodulated upon leaving

element 20.); and wherein the signal processing means (Kalinowski Fig. 1; 20, 32, 28);

Which is designed to receive the demodulated carrier signal (Kalinowski Fig.1; 20 The

carrier signal s demodulated upon leaving element 20.). Kalinowski does not disclose:

comprise a decision stage; and to decide whether the indicator signal was received.

8.   Hulvey discloses a method and apparatus for efficiently querying and identifying

multiple items on a communication channel comprising: comprise a decision stage

(Hulvey Fig. 3; 36) and to decide whether the indicator signal was received (Hulvey Fig.

7; 134).

9.   At the time of the invention, it would have been obvious to a person of ordinary skill in

the art to use Hulvey's invention, which uses a decision stage to decide if the indicator signal

was received, to further improve the invention of Kalinowski. Kalinowski present invention already detects when a collision accrues between two RFID tags, and by combining with Hulvey, Kalinowski would be able to better determine that a collision has accrued and eliminate some false positives. This method for improving the invention of Kalinowski was within the ordinary ability of one of ordinary skill in the art based on the teachings of Hulvey.

10.　　　As per claim 3, Kalinowski discloses a process for detecting simultaneous transmissions from electronic tags comprising: the signal processing means (Kalinowski Fig. 1; 20, 32, and 28). Kalinowski does not disclose: comprise a sequence control arrangement which sequence control arrangement includes a memory stage, by means of which the position of the information unit within the identification information causing the indicator signal can be stored.

11.　　　Hulvey discloses a method and apparatus for efficiently querying and identifying multiple items on a communication channel comprising: comprise a sequence control arrangement (Hulvey Fig. 6; 64-110); which sequence control arrangement includes a memory stage, by means of which the position of the information unit within the identification information causing the indicator signal can be stored (Hulvey Par. 78; "It would then record that the current digit string is "11" (FIG. 6, step 98), and also record that there is at least one transponder whose ID begins with "10" that needs to be isolated at a later time (FIG. 6, step 96).").

12.   At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use Hulvey's invention, which uses a sequence control arrangement to store the position of the information unit, to further improve the invention of Kalinowski. The processing means of Kalinowski, could be used to send the processed signal to a sequence control arrangement which would store information units of the collision tags, and retrieve them at a later time, as is being done in Hulvey. This method for improving the invention of Kalinowski was within the ordinary ability of one of ordinary skill in the art based on the teachings of Hulvey.

13.   As per claim 4, Kalinowski discloses a process for detecting simultaneous transmissions from electronic tags comprising: the signal processing means are (Kalinowski Fig. 1; 20, 32, 28); additionally arranged to receive a control signal via the interface (Kalinowski Fig. 1; 12, 20); and to process the received control signal (Kalinowski Fig. 1; 12, 20, 32, 28); and wherein the signal processing means (Kalinowski Fig. 1; 20, 32, 28); as a consequence of receiving and processing the control signal (Kalinowski Fig. 1; 12 and Kalinowski Par. 58; "circuit 20 performs the function of demodulation and decoding of the signals that modulate the carrier frequency signal").   Kalinowsk does not disclose: which control signal is provided to determine that information unit that has caused the indicator signal; are arranged to continue the supply of identification information with the information unit succeeding the information unit that has caused the indicator signal.

14.   Hulvey discloses a method and apparatus for efficiently querying and identifying

multiple items on a communication channel comprising: which control signal is provided

to determine that information unit that has caused the indicator signal (Hulvey Par. 80;

"The interrogation system then sends out a CHANGE1 command (FIG. 6, step 74) to cause all

transponders with non-zero push counter values to decrement their push counters (FIG. 7, steps

137, 141)."); are arranged to continue the supply of identification information with the

information unit succeeding the information unit that has caused the indicator signal.

(Hulvey Par. 79; "The CHANGE2 command simultaneously causes those transponders

which responded with a ZERO to increment their push counters"); when the information

unit determined by the control signal (Hulvey Par. 80; "The interrogation system then sends

out a CHANGE1 command (FIG. 6, step 74) to cause all transponders with non-zero push

counter values to decrement their push counters (FIG. 7, steps 137, 141)."); is identical with the

memorized information unit that has caused the indicator signal (Hulvey teaches that

the CHANGE2 push the value of the bit counter onto the stack, and the CHANGE1 pulls

the same value off the stack, therefore the two values will be identical.)

15.   At the time of the invention, it would have been obvious to a person of ordinary skill in

the art to use Hulvey's invention, which uses a control signal to identify the tag that cause

the collision, and an indicator signal to know when a collision was caused, to further

improve the invention of Kalinowski. The processing means of Kalinowski, could be used

to procces the indicator and control signal and to isolate the tag that caused the collision

and go back and retrieve the rest of the information at a later time. This method for

improving the invention of **Kalinowski** was within the ordinary ability of one of ordinary skill in the art based on the teachings of Hulvey.

16.   As per claim 5, Kalinowski discloses a process for detecting simultaneous transmissions from electronic tags comprising: the signal processing means (Kalinowski Fig. 1; 20, 32, and 28). Kalinowski does not disclose: are arranged in such a way that the control signal can be received and processed as a component of the indicator signal.

17.   Hulvey discloses a method and apparatus for efficiently querying and identifying multiple items on a communication channel comprising: are arranged in such a way that the control signal can be received and processed as a component of the indicator signal (Hulvey Par. 79; "HANGE2 command simultaneously causes those transponders which responded with a ZERO to increment their push counters" and Hulvey Par. 80; "The interrogation system then sends out a CHANGE1 command (FIG. 6, step 74) to cause all transponders with non-zero push counter values to decrement their push counters".).

18.   At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use Hulvey's invention, which uses a control signal to identify the tag that cause the collision, and an indicator signal to know when a collision was caused, to further improve the invention of **Kalinowski**. The processing means of Kalinowski, could be used to process the indicator and control signal and to isolate the tag that caused the collision and go back and retrieve the rest of the information at a later time. This method for

improving the invention of **Kalinowski** was within the ordinary ability of one of ordinary skill in the art based on the teachings of Hulvey.

19.   As per claim 6, Kalinowski and Hulvey discloses: a data carrier (Specification teaches the data carrier as being an apparatus) having a circuit as claimed in claim 1 (Kalinowski Fig. 1; 10 and Hulvey Fig. 2; 6).

20.   At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use Hulvey's invention, which uses an indicator signal, and means of storing information units of multiple responding tags, inside the processor of **Kalinowsk**, to further improve the invention of **Kalinowski**. Kalinowski present invention already detects when a collision accrues between two RFID tags, and by combining with Hulvey, Kalinowski would be able to isolate the tag that caused the collision and go back and retrieve the rest of the information at a later time. This method for improving the invention of **Kalinowski** was within the ordinary ability of one of ordinary skill in the art based on the teachings of Hulvey.

21.   As per claim 7, Kalinowski discloses a process for detecting simultaneous transmissions from electronic tags comprising: supplying the identification information (Kalinowski Fig. 1; 22); in the form of information units (Kalinowski Par. 4 "as a memory capable of storing an n-bit binary code"); via the interface to the communications arrangement (Kalinowski Fig. 1; 46); and receiving and processing (Kalinowski Fig. 1; 12, 20, 32, 28); which indicator signal indicates a substantially simultaneous

appearance of two different information units (Kalinowski Par. 35; "detecting

substantially simultaneous transmission of at least two electronic tags"); of which two

different information units (Kalinowski Fig. 5; M'1, M'2); the one information unit is

contained in the identification information stored in a memory stage of the circuit

(Kalinowski Par. 59; "The information relative to the product with which the tag is

associated are recorded in a memory 22"); and the other information unit is contained in

different identification information stored in a memory stage of a different circuit

(Kalinowsk Par. 35; "tag identification system including a multiplicity of electronic tags

associated with a query/read/write device"); upon detection of such a substantially

simultaneous appearance of different information units (Kalinowski Par. 35; "detecting

substantially simultaneous transmission of at least two electronic tags"); and is

communicated to the circuit (Kalinowski Fig. 1; 46); and interruption of the supply of

identification information as a consequence of receiving and processing (Kalinowski Fig.

1; 12, 20, 32, 28).

22.   Kalinowski does not disclose: an indicator signal; and which indicator signal is

generated by the communications arrangement; the indicator signal; after the supply of

the information unit that has caused the indicator signal and memorizing of at least the

information unit that has caused the indicator signal.

23.   Hulvey discloses a method and apparatus for efficiently querying and identifying

multiple items on a communication channel comprising: an indicator signal (Hulvey

Fig.4; 56; Par. 59; the CHANGE2 COMMAND); and which indicator signal is generated

by the communications arrangement (Hulvey Par. 62; "a READ, CHANGE1, or

CHANGE2 command from the interrogating transceiver."); the indicator signal (Hulvey

Fig.4; 56; Par. 59; the CHANGE2 COMMAND); after the supply of the information unit

that has caused the indicator signal and memorizing of at least the information unit that

has caused the indicator signal (Hulvey Par. 78; "It would then record that the current

digit string is "11" (FIG. 6, step 98), and also record that there is at least one

transponder whose ID begins with "10" that needs to be isolated at a later time (FIG. 6,

step 96).").

24.   At the time of the invention, it would have been obvious to a person of ordinary skill in

the art to use Hulvey's invention, which uses an indicator signal, and means of storing

information units of multiple responding tags, inside the processor of Kalinowsk, to further

improve the invention of Kalinowski. Kalinowski present invention already detects when a

collision accrues between two RFID tags, and by combining with Hulvey, Kalinowski

would be able to isolate the tag that caused the collision and go back and retrieve the

rest of the information at a later time. This method for improving the invention of Kalinowski

was within the ordinary ability of one of ordinary skill in the art based on the teachings of

Hulvey.

25.   As per claim 8, Kalinowski discloses a process for detecting simultaneous

transmissions from electronic tags comprising: a carrier signal appearing at the interface

is demodulated (Kalinowski Fig. 1; 12 and Kalinowski Par. 58; "circuit 20 performs the

function of demodulation and decoding of the signals that modulate the carrier

frequency signal"); and wherein on the basis of the demodulated carrier signal

(Kalinowski Fig.1; 20 The carrier signal s demodulated upon leaving element 20.). Kalinowski does not disclose: a decision is made as to whether the indicator signal was received.

26.   Hulvey discloses a method and apparatus for efficiently querying and identifying multiple items on a communication channel comprising: a decision is made as to whether the indicator signal was received (Hulvey Fig. 7; 134).

27.   At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use Hulvey's invention, which uses a decision stage to decide if the indicator signal was received, to further improve the invention of Kalinowski. Kalinowski present invention already detects when a collision accrues between two RFID tags, and by combining with Hulvey, Kalinowski would be able to better determine that a collision has accrued and eliminate some false positives. This method for improving the invention of Kalinowski was within the ordinary ability of one of ordinary skill in the art based on the teachings of Hulvey.

28.   As per claim 9, Hulvey further discloses a method and apparatus for efficiently querying and identifying multiple items on a communication channel comprising: the position of the information unit within the identification information that has caused the indicator signal is stored (Hulvey Par. 78; " and also record that there is at least one transponder whose ID begins with "10" that needs to be isolated at a later time (FIG. 6, step 96).").

29.   At the time of the invention, it would have been obvious to a person of ordinary skill in
the art to use Hulvey's invention, which uses an indicator signal, and means of storing
information units of multiple responding tags, to further improve the invention of Kalinowski.
Kalinowski present invention already detects when a collision accrues between two
RFID tags, and by combining with Hulvey, Kalinowski would be able to isolate the tag
that caused the collision and go back and retrieve the rest of the information at a later
time. This method for improving the invention of Kalinowski was within the ordinary ability of
one of ordinary skill in the art based on the teachings of Hulvey.

30.   As per claim 10, Kalinowski discloses a process for detecting simultaneous
transmissions from electronic tags comprising: a control signal is received via the
interface (Kalinowski Fig. 1; 12, 20). Kalinowski does not disclose: which control signal
is provided to determine that information unit that has caused the indicator signal , and
wherein, as a consequence of receiving and processing the control signal, the supply of
the identification information is continued with the information unit succeeding the
information unit that has caused the indicator signal; when the information unit
determined by the control signal is identical with the memorized information unit that
has caused the indicator signal.

31.   Hulvey discloses a method and apparatus for efficiently querying and identifying
multiple items on a communication channel comprising: which control signal is provided
to determine that information unit that has caused the indicator signal (Hulvey Par. 80;
"The interrogation system then sends out a CHANGE1 command (FIG. 6, step 74) to cause all

transponders with non-zero push counter values to decrement their push counters (FIG. 7, steps 137, 141)."); and wherein, as a consequence of receiving and processing the control signal (Hulvey Fig. 7; 137); the supply of the identification information is continued with the information unit succeeding the information unit that has caused the indicator signal (Hulvey Par. 79; "The CHANGE2 command simultaneously causes those transponders which responded with a ZERO to increment their push counters (FIG. 7, step 139), and causes those transponders which responded with a ONE to respond with the next digit (FIG. 7, step 128.)" The CHANGE2 command tells the transponders that caused the collision to stop transmitting. And, Hulvey Par. 80; "to cause all transponders with non-zero push counter values to decrement their push counters (FIG. 7, steps 137, 141). Each transponder whose push counter value thereby becomes zero (FIG. 7, step 143) will also respond with the next bit value"); when the information unit determined by the control signal is identical with the memorized information unit that has caused the indicator signal (Hulvey teaches that the CHANGE2 push the value of the bit counter onto the stack, and the CHANGE1 pulls the same value off the stack, therefore the two values will be identical.).

32.   At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use Hulvey's invention, which uses a control signal to identify the tag that cause the collision, and an indicator signal to know when a collision was caused, to further improve the invention of Kalinowski. The processing means of Kalinowski, could be used to process the indicator and control signal and to isolate the tag that caused the collision and go back and retrieve the rest of the information at a later time. This method for

improving the invention of **Kalinowski** was within the ordinary ability of one of ordinary skill in

the art based on the teachings of Hulvey.

33.   As per claim 11 Hulvey further discloses a method and apparatus for efficiently

querying and identifying multiple items on a communication channel comprising: the

control signal is received and processed as a component of the indicator signal (Hulvey

Par. 79; "HANGE2 command simultaneously causes those transponders which responded with a

ZERO to increment their push counters" and Hulvey Par. 80; "The interrogation system then

sends out a CHANGE1 command (FIG. 6, step 74) to cause all transponders with non-zero push

counter values to decrement their push counters".).

34.   At the time of the invention, it would have been obvious to a person of ordinary skill in

the art to use Hulvey's invention, which uses a **control signal to identify the tag that cause**

the collision, and an indicator signal to know when a collision was caused, to further

improve the invention of **Kalinowski. The processing means of Kalinowski, could be used**

to process the indicator and control signal and to isolate the tag that caused the collision

and go back and retrieve the rest of the information at a later time. This method for

improving the invention of **Kalinowski** was within the ordinary ability of one of ordinary skill in

the art based on the teachings of Hulvey.

35.   As per claim 12, Kalinowski discloses a process for detecting simultaneous

transmissions from electronic tags comprising: an interface for contact less

communication with a data carrier (Kalinowski Fig. 1; 42, 10); via which interface

identification information (Kalinowski FIG. 2); that can be supplied from the data carrier

can be received in the form of information units (Kalinowski Par. 4 "as a memory

capable of storing an n-bit binary code"); and wherein the communications arrangement

comprises collision detection means (Kalinowski Par. 71; "This characteristic makes it

possible to detect a collision in the QRW device."); which collision detection means are

arranged to detect a substantially simultaneous appearance of two different information

units (Kalinowski Par. 35; "detecting substantially simultaneous transmission of at least

two electronic tags"); of which two different information units the one information unit

originates from the data carrier and the other information unit originates from a different

data carrier (Kalinowski Par. 59; "The information relative to the product with which the

tag is associated are recorded in a memory 22"); and to supply the indicator signal via

the interface (Kalinowski Fig. 1; 42, 10); which indicator signal indicates the detection

of the substantially simultaneous appearance of the two different information units

(Kalinowski Par. 35; "detecting substantially simultaneous transmission of at least two

electronic tags"); and wherein the communications arrangement comprises information

unit-processing means (Kalinowski Par. 64; "The signals received by the antenna 42

are applied to a receiving circuit 56 which performs detection, demodulation and

decoding."); which, as a consequence of the detection of such a substantially

simultaneous appearance of the different information units (Kalinowski Par. 35;

"detecting substantially simultaneous transmission of at least two electronic tags"); by

the collision-detection means (Kalinowski Par. 71; "This characteristic makes it possible

to detect a collision in the QRW device."). Kalinowsk does not disclose: and which collision detection means; are arranged to generate an indicator signals are arranged to store and process every information unit that has appeared before the information unit that has caused the indicator signal.

36.   Hulvey discloses a method and apparatus for efficiently querying and identifying multiple items on a communication channel comprising: and which collision detection means are arranged to generate an indicator signal (Hulvey Fig.4; 56; Par. 59; the CHANGE2 COMMAND); are arranged to store and process every information unit that has appeared before the information unit that has caused the indicator signal (Hulvey Par. 78; "It would then record that the current digit string is "11" (FIG. 6, step 98), and also record that there is at least one transponder whose ID begins with "10" that needs to be isolated at a later time (FIG. 6, step 96).").

37.   At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use Hulvey's invention, which uses an indicator signal, and means of storing information units of multiple responding tags, to further improve the invention of Kalinowski. Kalinowski present invention already detects when a collision accrues between two RFID tags, and by combining with Hulvey, Kalinowski would be able to isolate the tag that caused the collision and go back and retrieve the rest of the information at a later time. This method for improving the invention of Kalinowski was within the ordinary ability of one of ordinary skill in the art based on the teachings of Hulvey

38.   As per claim 13, Kalinowski discloses a process for detecting simultaneous

transmissions from electronic tags comprising: the information unit-processing means

(Kalinowski Par. 64; "The signals received by the antenna 42 are applied to a receiving

circuit 56 which performs detection, demodulation and decoding."); and to make

available the control signal for supply of the control signal via the interface (Kalinowski

Par. 63; "he output signals from the modulator 50 are applied to a power amplifier 54

the output terminal of which is directly connected to the antenna 42."); and wherein the

information unit-processing means (Kalinowski Par. 64; "The signals received by the

antenna 42 are applied to a receiving circuit 56 which performs detection, demodulation

and decoding.").   Kalinowski does not disclose: are additionally arranged to generate a

control signal; which control signal is provided to determine that information unit that

has caused the indicator signal; following the supply of the control signal; are arranged

to store and to process the information unit determined by the control signal together

with every information unit that has appeared before the information unit that has

caused the indicator signal

39.   Hulvey discloses a method and apparatus for efficiently querying and identifying

multiple items on a communication channel comprising :are additionally arranged to

generate a control signal (Hulvey Par. 62; "a READ, CHANGE1, or CHANGE2

command from the interrogating transceiver."); which control signal is provided to

determine that information unit that has caused the indicator signal (Hulvey Par. 80;

"The interrogation system then sends out a CHANGE1 command (FIG. 6, step 74) to cause all

transponders with non-zero push counter values to decrement their push counters (FIG. 7, steps

137, 141)."); following the supply of the control signal (Hulvey Par. 80; "The interrogation system then sends out a CHANGE1 command (FIG. 6, step 74) to cause all transponders with non-zero push counter values to decrement their push counters (FIG. 7, steps 137, 141)."); are arranged to store and to process the information unit determined by the control signal together with every information unit that has appeared before the information unit that has caused the indicator signal (Hulvey Par. 78; "It would then record that the current digit string is "11" (FIG. 6, step 98), and also record that there is at least one transponder whose ID begins with "10" that needs to be isolated at a later time (FIG. 6, step 96).").

40.   At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use Hulvey's invention, which uses a control signal to identify the tag that cause the collision, and an indicator signal to know when a collision was caused, to further improve the invention of Kalinowski. The processing means of Kalinowski, could be used to process the indicator and control signal and to isolate the tag that caused the collision and go back and retrieve the rest of the information at a later time. This method for improving the invention of Kalinowski was within the ordinary ability of one of ordinary skill in the art based on the teachings of Hulvey.

41.   As per claim 14, Kalinowski discloses a process for detecting simultaneous transmissions from electronic tags comprising: the collision-detection means (Kalinowski Par. 71; "This characteristic makes it possible to detect a collision in the QRW device.");from the information unit-processing means (Kalinowski Par. 64; "The

signals received by the antenna 42 are applied to a receiving circuit 56 which performs

detection, demodulation and decoding."). Kalinowski does not disclose: are arranged to

receive the control signal; and to supply the control signal as a component of the

indicator signal.

42.   Hulvey discloses a method and apparatus for efficiently querying and identifying

multiple items on a communication channel comprising: are arranged to receive the

control signal (Hulvey Fig 7; 137); and to supply the control signal as a component of

the indicator signal (Hulvey Par. 79; "HANGE2 command simultaneously causes those

transponders which responded with a ZERO to increment their push counters" and Hulvey Par.

80; "The interrogation system then sends out a CHANGE1 command (FIG. 6, step 74) to cause

all transponders with non-zero push counter values to decrement their push counters".).

43.   At the time of the invention, it would have been obvious to a person of ordinary skill in

the art to use Hulvey's invention, which uses a control signal to identify the tag that cause

the collision, and an indicator signal to know when a collision was caused, to further

improve the invention of Kalinowski. The processing means of Kalinowski, could be used

to process the indicator and control signal and to isolate the tag that caused the collision

and go back and retrieve the rest of the information at a later time. This method for

improving the invention of Kalinowski was within the ordinary ability of one of ordinary skill in

the art based on the teachings of Hulvey.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JERRAMI JOHNSON whose telephone number is (571)270-5181. The examiner can normally be reached on M-F 6am-3pm est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pankaj Kumar can be reached on (571)272-3011. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/J.J./

/Pankaj Kumar/

Supervisory Patent Examiner, Art Unit 4147